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10/528,402	04/06/2005	Elena Liliamou	60282.00244	4428
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EXAMINER				
CEHC, KENAN				
ART UNIT		PAPER NUMBER		
2416				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,402

Applicant(s)

LIALIAMOU ET AL.

Examiner

KENAN CEHIC

Art Unit

2416

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

A computer program embodied on a computer-readable medium, which is configured to control a processor to perform the operation as described in claims 23 is not described in the original disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1, 11, 21, 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Roberts (US 2003/0152039).

For claim 1 and similarly claim 23, Roberts discloses A method, comprising: enforcing a charging policy (see section 0012-14 "determining said rules and each packet address, a respective billing tariff and account for that packet" and section 0020-0021) at a network element (see section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN" and section 0028, 0058 "charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.." and section 0062-68 "GGSN filter...and is at a MusicSite rate" and section 0095, section 0101 "GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS"; section 0104) to be applied to reaching the network element (see section 014 "packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packet, preferably at the GGSN" and section 0028, section 0036) during a packet data protocol context (see section 0004 "billing system to differentiate between different services on the same PDP context"; sections 0062-79 "PDP context"; section 0087 "context is set-up"), the packet data protocol context (see section 0004 "billing system to differentiate between different services on the same PDP context"; sections 0062-79 "PDP context"; section 0087 "context is set-up") comprising a plurality of data flows (see section 0004 "billing system to differentiate between different services on the same PDP context"; sections 0062-79 "PDP context"), with each data flow being distinguishable by a set of flow parameters (see section 0012-014 "each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packets, preferably at the GGSN"

and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), wherein said charging policy defines charging rules per flow of the plurality of flows,(see section 0012-14 ”determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104); observing the data packets reaching said network element (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96

“initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets each including at least one flow parameter, and detecting at least one data flow from flow parameters included in the observed data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); mapping each of the data packets to detected data flows in accordance with the at least one flow parameter included in the respective data packet (see section 0012-014 “each

packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”);

matching said detected data flows to an enforced charging policy (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”;

section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 "VoIP/Video Streaming..."; and applying said enforced charging policy to said data flows to generate charging information (see section 0012-014 "each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN" and sections 0026-28, section 0036 "IP address or URL...provisioning the relevant URLs as required..."; 0058 "charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied."; sections 0062-0079 "URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate"; section 0093-96 "initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges..."; section 0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 "VoIP/Video Streaming..."; section 0015" purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider

of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026
“account..accounting system”, section 0030, 0060
“transaction...account..bill...accounting....records..”).

For claim 23, Roberts discloses a computer program embodied on a computer-readable medium, the computer program (see section 0019 “methos may be performed...control of software in machine readable form on a storage medium”) configured to control a processor (see figure) to perform operations (see section 0019 “methos may be performed...control of software in machine readable form on a storage medium”)

For claim 11, an enforcing unit (see figure; reference char 10) configured to enforce a charging policy at a network element to be applied to data packets reaching the network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015 “purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”), the packet data protocol context comprising a plurality of data flows (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”), **with** each data flow of the plurality of data flows being distinguishable by a set of flow parameters (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the

GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), wherein said charging policy defines charging rules per data flow of the plurality of flows (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied.”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”;); an observation unit (see figure; reference char 1-5,10, 13) configured to observe said data packets reaching said network element (see section 0012-014 “each packet having an

address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets each including at least one flow parameter, and detect at least one data flow from flow parameters included in the observed data packets (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on

storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); a mapping unit (see figure; reference char 1-5,10, 13) configured to map each of the data packets to detected data flows in accordance with the at least one flow parameter included in the respective data packet (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”); a matching unit (see figure; reference char 1-5,10, 13) configured to match said detected data flows to an enforced charging policy (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP

address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...”; section 0114 “VoIP/Video Streaming...”; an application unit (see figure; reference char 1-5,10, 13)configured to apply said enforced charging policy to said data flows (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-

time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”); and a generation unit (see figure; reference char 1-5,10, 13), responsive to said application unit (see figure; reference char 1-5,10, 13), configured to generate charging information (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of

GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”).

For claim 21, Roberts discloses enforcing means (see figure; reference char 1-5,10, 13) configured to enforce a charging policy at a network element to be applied to data packets reaching the network element (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of

GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”), the packet data protocol context comprising a plurality of data flows (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”), with each data flow of the plurality of data flows being distinguishable by a set of flow parameters (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL....server virtual domain/ IP

address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 "VoIP/Video Streaming..."), wherein said charging policy defines charging rules per data flow of the plurality of flows (see section 0012-014 "each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0020-21 "charging information is achieved via the analysis of packets, preferably at the GGSN" and sections 0026-28, section 0036 "IP address or URL...provisioning the relevant URLs as required..."; 0058 "charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..."; sections 0062-0079 "URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate"; section 0093-96 "initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets"; section 0099-101 "IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges..."; section 0104-109 "packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 "VoIP/Video Streaming..."); observation means (see figure; reference char 1-5, 10, 13) configured to observe said data packets reaching said network element (see section 0012-014 "each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff" and section 0021 "analysis of packets, preferably at the GGSN" and section 0027-28, section 0036 "IP address or

URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”), the data packets each including at least one flow parameter, and detect at least one data flow from flow parameters included in the observed data packets (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced reate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; mapping means (see figure; reference char 1-5,10,13)

configured to map each of the data packets to detected data flows in accordance with the at least one flow parameter included in the respective data packet (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packets, preferably at the GGSN” and section 0027-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; sections 0062-0079 “URL...PDP context...IP address...charging ID...”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; matching means (see figure; reference char 1-5,10, 13) configured to match said detected data flows of data to an enforced charging policy (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID...

GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; application means (see figure; reference char 1-5, 10, 13) configured to apply said enforced charging policy to said data flows (see section 0012-014 “each packet having an address...determining from...each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR...real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114

“VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid account....credit applied to an account held by the provider of those goods or services”, section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”, section 0030, 0060 “transaction...account..bill...accounting....records..”); and generation means (see figure; reference char 1-5,10, 13), responsive to said application means (see figure; reference char 1-5,10, 13), configured to generate charging information (see section 0012-014 “each packet having an address...determining from....each packet address...packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and sections 0026-28, section 0036 “IP address or URL...provisioning the relevant URLs as required...”; 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..”; sections 0062-0079 “URL...PDP context...IP address...charging ID... GGSN filter...and is at a MusicSite rate”; section 0093-96 “initiates the FTP...free access URL...track is downloaded...reduced rate...IP multiplexes...chargeable packets”; section 0099-101 “IP sniffing...HTTP session...the GGSN matches site IP address/ URL etc and places cost in the relevant tariff CDR..real-time usage based charges...”; section 0104-109 “packets being charge based on storefront...URL...server virtual domain/ IP address is part of GGSN zero-rate filter...downloaded packets...after one-time URL allocated...charging...; section 0114 “VoIP/Video Streaming...”; section 0015” purchased goods or services are debited to a customer pre-paid or postpaid

account....credit applied to an account held by the provider of those goods or services”,
section 0017 “credit transfer”, section 0021, 0024, 0026 “account..accounting system”,
section 0030, 0060 “transaction...account..bill...accounting....records..”).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 2, 6, 12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts
(US 2003/0152039) in view of Jogalekar (US 7,002,977)

For claim 2, 6, 12, 16, Roberts discloses all the claimed invention as described above.

Roberts is silent about:

For claim 2 and similarly for claim 12, forwarding said generated charging information to
a charging system of the communication network.

For claim 6, upon enforcing said charging policy, data volume counters are initialized.

For claim 12, the forwarding unit.

For claim 16, an initialization unit configured to initialize data volume counters and/or
time counters responsive to enforcing said charging policy.

Jogalekar teaches a network element with the following features:

As regarding claim 2 and 12, Jogalekar discloses forwarding (see column 8 lines 38-48
“billing engine..transmit...to the network manager”) generated charging information (see
column 8 lines 18-25 “billing engine may compile ...billing and accounting

information”) to a charging system (see column 8 lines 38-48 “network manager” and column 4 lines 47-49 “network manager...receives...information...for accounting and billing purposes”) of the communication network (see column 4 lines 1-7 “network”). As regarding claim 6, Jogalekar discloses initializing (see column 12 lines 61-61 “creates service-specific counters such as either incrementing...or decrementing...”) data volume counters (see column 11 lines 41-50 “service-specific counters...counters...counts the packets”) upon enforcing said charging policy (see column 1 lines 61-67 “charging a premium rate” and column 11 lines 11-13 “policy engine...checks...policy table” and Figure 6 608,614, 616).

For claim 12, Jogalekar discloses the forwarding unit (see column 8 lines 38-48 “billing engine..transmit...to the network manager”)

For claim 16, an initialization unit configured to initialize data volume counters (see column 12 lines 61-61 “creates service-specific counters such as either incrementing...or decrementing...”) responsive to enforcing said charging policy (see column 1 lines 61-67 “charging a premium rate” and column 11 lines 11-13 “policy engine...checks...policy table” and Figure 6 608,614, 616).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Jogalekar in order to provide a method of a sophisticated accounting and billing method where different traffic, such as high priority traffic, is charged at a premium rate (see Jogalekar col 1).

4. Claim 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Gai et al. (US 7,185,073).

For claim 3 and 13, Roberts teaches the claimed invention as described in paragraph 4.

Roberts are silent about:

As regarding claim 3, enforcing is performed upon start-up of the network element.

As regarding claim 13, Gai et al discloses said enforcing means are responsive to start-up of the network element to perform the enforcing.

Gai et al. from the same or similar field of endeavor discloses enforcing a policy the following features:

As regarding claim 3, Gai et al discloses enforcing is performed (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”) upon start-up (see column 6 lines 21-26 “Upon initialization”) of the network element (see column 6 lines 21-26 “intermediated devices”)

As regarding claim 13, Gai et al discloses said enforcing means (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”) are responsive to start-up (see column 6 lines 21-26 “Upon initialization”) of the network element (see column 6 lines 21-26 “intermediated devices”) to perform the enforcing (see column 6 lines 21-26 “rules that are utilized by the intermediated devices”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Gai et al., in order to provide a system which can implement network wide management policies (like

queuing strategies), without the need to manually configure each device which is time consuming and error prone (see Gai column 5 lines 35-64).

5. Claim 4 and 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Hundscheidt (US 7,369,541).

For claim 4 and 14, Roberts discloses all the claimed invention as described above.

Roberts is silent about:

For claim 4, the enforcing is performed upon activation of the packet data protocol context.

For claim 14, enforcing unit is further configured to be responsive to activation of the data protocol context to perform the enforcing.

Hundscheidt from the same or similar field of endeavor discloses the following features:

For claim 4, Hundscheidt discloses the enforcing is performed upon activation of the packet data protocol context (see col 11 line 15-35 "Activate PDP Context accept...starts to charge the attached mobile station").

For claim 14, Hundscheidt discloses enforcing unit is further configured to be responsive to activation of the data protocol context to perform the enforcing (see col 11 line 15-35 "Activate PDP Context accept...starts to charge the attached mobile station").

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Hundscheidt, in order to provide an efficient introduction and performing of multicast in a point-to-point oriented packet-switched telecommunication network (see Hundscheidt col 5)

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) and Hundscheidt (US 7,369,541) as applied to claim 4 above, further in view of Schweitzer et al. (US 2002/0013849 A1).

For claim 5, Roberts discloses the packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”).

Robert and Hundscheidt does not explicitly disclose the following:

As regarding claim 5, enforcing is performed dynamically during the lifetime of the data session.

Schweitzer from the same or similar field of endeavor discloses the following:

As regarding claim 5, Schweitzer discloses enforcing (see section 0035 lines 4-15 “voice over IP call...single session...checked...does not exceed..”) is performed dynamically (see section 0035 lines 4-15 “...single session...checked every minute...does not exceed..”) during the lifetime (see section 0033 lines 1-4 “session..definite time bound”) of the data session (see section 0035 lines 4-15 “voice over IP call...single session”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify/combine the system of Roberts and Hundscheidt by using the features, as taught by Schweitzer, in order to provide a method of limiting/allowing certain user certain amount of bandwidth, quality of service to certain users (for example depending on the account type or fees payed) (see Schweitzer sections 0043-46)

7. Claims 8-10, 15, 18- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Schweitzer et al. (US 2002/0013849 A1).

For claim 9 and similarly 19, Roberts discloses creating (see section 0036 “content-based billing, content value...relevant URLs”) a plurality of charging policies (see section 0012-14 “determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104), each charging policy of the charging policies (see section 0012-14 “determining said rules and each packet address, a respective billing tariff and account for that packet” section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104) comprising at least one flow parameter (see section 0036 “IP address or URL...relevant URLs”), selecting a charging policy based on offered services (see section 0036 “operator enters a deal to provide premium rate access charges”), and distributing said selected charging policy to at least one network element (see section 0036 “pre-provisioned...provisioning the relevant URLs as required into the

GGSN”) to be enforced at said at least one network element (see section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section 0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104) for charging of data reaching said at least one network element (see section 014 “packet analyzer for determining from said rules and each packet address, a respective billing tariff” and section 0021 “analysis of packet, preferably at the GGSN” and section 0028, section 0036) during a packet data protocol context (see section 0004 “billing system to differentiate between different services on the same PDP context”; sections 0062-79 “PDP context”; section 0087 “context is set-up”);

For claim 19, Roberts discloses a creation unit (see figure and section 0036 “operator”), a selection unit (see figure and section 0036 “operator”), a distribution unit (see figure and section 0036 “operator”).

For claim 10 and 20, Roberts discloses wherein said charging policy is selected (see section 0036 “operator enters a deal to provide premium rate access charges”) for a type of said network element (see section 0020-21 “charging information is achieved via the analysis of packets, preferably at the GGSN” and section 0028, 0058 “charging is related to content or application, rules within the GGSN will be triggered...charging rates being applied..” and section 0062-68 “GGSN filter...and is at a MusicSite rate” and section

0095, section 0101 “GGSN matches site IP address/URL etc and places costs in the relevant traffic CDS”; section 0104).

Robert does not explicitly disclose the following:

For claim 8 and 18, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication;

For claim 9 and similarly 19, where the charging policy comprises at least one of a charging/accounting type, an accounting event trigger, a charging metrics, and a tariffing indication; selecting a charging policy based on subscriber information.

As regarding claim 15, Schweitzer discloses said enforcing means the enforcing during the life-time of the data session.

Schweitzer from the same or similar field of endeavor discloses the following features:

For claim 8 and 18, Schweitzer discloses where the charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte) and a tariffing indication (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte)

For claim 9 and similarly 19, Schweitzer discloses where the charging policy comprises at least one of a charging metrics (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP

telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte) and a tariffing indication (see section 0043-45 lines 5-6 “policy..billed for usage” and section 0063 lines 1-5 “billing on a per session basis... IP telephony, that might be charge per minute per leg. For HTTP that might be a charge per megabyte) ,selecting a charging policy based on subscriber information (see section 0035 lines 10-15 “prepaid calling” and section 0043 lines 5-6 “policy might control how users..are billed for usage”, section 0045 “policy...user and group based restriction and evaluations”).

As regarding claim 15, Schweitzer discloses said enforcing means (see section 0102 “hardware...combination of hardware and software”)are dynamically performing (see section 0035 lines 4-15 “...single session...checked every minute...does not exceed..) the enforcing (see section 0035 lines 4-15 “voice over IP call...single session...checked...does not exceed..) during the life-time (see section 0033 lines 1-4 “session..definite time bound”) of the data session (see section 0035 lines 4-15 “voice over IP call...single session”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify/combine the system of Roberts by using the features, as taught by Schweitzer, in order to provide a method of limiting/allowing certain user certain amount of bandwidth, quality of service to certain users (for example depending on the account type or fees paid) (see Schweitzer sections 0043-46)

8. Claim 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 2003/0152039) in view of Chaskar (US 2002/0122432)

For claim 7 and 17, Roberts discloses all the claimed invention as described above.

For claim 7 and 17, Roberts further discloses wherein said data flows are Internet Protocol (IP) based packet data flows (see section 0012 “packet address” section 0021 “based on the destination of the service as described by the URL or IP address and port number of the server”; section 0036 “IP address or URL”; sections 0062-79 “URL”; section 0101),

Roberts does not explicitly disclose the following:

For claim 7 and similarly 17, said flow parameters comprise at least one of an IP header field, a transport header field, and an application level information.

Chaskar from the same or similar field of endeavor discloses the following features:

For claim 7 and similarly 17, Chaskar discloses said flow parameters comprise at least one of an IP header field, a transport header field, (see section 0019 “fields..packet header such as source/destination IP addresses, TCP/UDP port address...” and section 0025)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Roberts by using the features, as taught by Chaskar, in order to provide a technique that supports various QoS classes across the GPRS core network in a scalable and efficient way (see Chaskar sections 0004-10).

Response to Arguments

9. Applicant's arguments filed 01/21/2009 have been fully considered but they are not persuasive.

For claim 23, the applicant argues that a the limitations of the claim are commonly understood by a person of ordinary skill in the art to be performed by a computing device having a memory and processor and further that memory is recognized as a computer-readable medium. While, it is true that memory is considered a computer readable memory, the applicant does not describe any embodiment in the original disclosure that all the limitations of claim 23 are performed by software embodied in a memory / computer readable medium. Further, regarding that a person of ordinary skill would recognize that memory and processor would be used to process packets and perform charging such as in claim 23, the examiner takes the stance that it is not inherent that such a method must be performed by software as embodied in software and executed by a processor, as a hardware implementation is possible.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/
Examiner, Art Unit 2416

/Kwang B. Yao/
Supervisory Patent Examiner, Art Unit 2416